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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,277	12/28/2001	Woo Seok Kang	K-0375	4097

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EXAMINER

ADDY, ANTHONY S

ART UNIT	PAPER NUMBER
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2681

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/029,277

Applicant(s)

KANG ET AL.

Examiner

Anthony S Addy

Art Unit

2681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3 and ⁵~~4~~-13 are rejected under 35 U.S.C. 102(e) as being anticipated by **Yeom U.S. Patent Number 6,526,027 (hereafter Yeom)**.

Regarding claim 1, Yeom discloses a method for transmitting messages on a paging channel (see col. 1, lines 8-13) comprising the step of first transmitting data messages while transmitting overhead messages after delaying them by a predetermined period on a corresponding slot, if the total length of the overhead messages and the data messages exceeds one slot when the overhead messages are transmitted at a constant overhead message transmission period (see col. 2, lines 16-28 and Figs. 2a-2c; where charts showing channel slots of transmitting convention broadcast short message service in a mobile communication system is shown).

Regarding claim 2, Yeom discloses all the limitations of claim 1. In addition, Yeom teaches a method for transmitting messages on a paging channel, further comprising the steps of; transmitting only the overhead

Art Unit: 2681

messages to be transmitted while delaying the data messages by a next overhead message transmission period if the total length of the overhead messages and the data messages to be transmitted exceeds one slot and the corresponding slot is the last slot in a transmission period of the overhead messages (see col. 2, lines 43-51, col. 5, line 37 through col. 6, line 65 and Fig. 3) and transmitting the data messages on a slot having the same number as that of the corresponding slot in the next overhead message transmission period (see col. 5, lines 1-4 and Figs. 2a-2c).

Regarding claim 3, Yeom discloses all the limitations of claim 1. In addition, Yeom teaches a method for transmitting messages on a paging channel, further comprising the steps of; delaying the overhead messages and the data messages to be transmitted by the next overhead message transmission period if the overhead messages are delayed by the maximum delay time period set by a system (see col. 2, lines 16-25 and lines 43-51) and transmitting the data messages on a slot having the same number as that of the corresponding slot in the next overhead message transmission period (see col. 5, lines 1-4 and Figs. 2a-2c).

Regarding claim 5, Yeom discloses all the limitations of claim 1. In addition, Yeom teaches a method, wherein the overhead messages are all transmitted within one overhead message transmission period (see col. 6, lines 8-17 and Figs. 2c-2d).

Regarding claim 6, Yeom discloses all the limitations of claim 5. In addition, Yeom teaches a method, wherein the one overhead message

Art Unit: 2681

transmission period is 16 slots (see Fig. 2a; where slots 0-f are shown in one transmission period).

Regarding claim 7, Yeom discloses all the limitations of claim 1. In addition, Yeom teaches a method, wherein the overhead messages are transmitted per 2 slots (see col. 6, lines 19-28 and Figs. 2b-2d; where messages are shown transmitted per 2 slots).

Regarding claim 8, Yeom discloses a method for transmitting messages on a paging channel comprising the steps of: first transmitting overhead messages while delaying data messages to be transmitted by a predetermined period, if the total length of the overhead messages and the data messages exceeds one slot when the overhead messages are transmitted at a constant overhead message transmission period (see col. 2, lines 16-28 and Figs. 2a-2c; where charts showing channel slots of transmitting convention broadcast short message service in a mobile communication system is shown); and transmitting the data messages on a particular slot on which the overhead messages of a next overhead message transmission period are not transmitted (see col. 5, lines 15-33).

Regarding claim 9, Yeom discloses all the limitations of claim 8. In addition, Yeom teaches a method, wherein the delayed data messages are transmitted on the same slot number as that of a prior overhead message transmission period (see col. 5, lines 1-4 and Figs. 2a-2c).

Regarding claim 10, Yeom discloses all the limitations of claim 8. In addition, Yeom teaches a method, wherein the overhead messages are all

Art Unit: 2681

transmitted within one overhead message transmission period in serial order (see col. 6, lines 19-28).

Regarding claim 11, Yeom discloses all the limitations of claim 10. In addition, Yeom teaches a method wherein all of the overhead messages are transmitted periodically in every overhead message transmission period, the overhead messages are transmitted in a next overhead message transmission period (see col. 6, lines 29-64).

Regarding claim 12, Yeom discloses all the limitations of claim 10. In addition, Yeom teaches a method, wherein the one overhead message transmission period are 16 slots (see Fig. 2a; where slots 0-f are shown in one transmission period).

Regarding claim 13, Yeom discloses all the limitations of claim 8. In addition, Yeom teaches a method, wherein the overhead messages are transmitted per two slots for all the slots (see col. 6, lines 19-28 and Figs. 2b-2d; where messages are shown transmitted per 2 slots).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yeom U.S. Patent Number 6,526,027 (hereafter Yeom) as applied to claim 1

Art Unit: 2681

above, and further in view of **Islam et al., U.S. Patent Number 6,754,229 (hereafter Islam)**.

Regarding claim 4, Yeom discloses all the limitations of claim 1. Yeom does not specifically teach a method of informing terminal units in service in a corresponding sector or in an idle handoff state through a configuration change indicator (CCI) of a corrected quick paging channel whether system information has been changed.

Islam, however, discloses a method alerting a remote device in an idle state over a channel using a quick paging channel (QPCH) and configuration change indicator (CCI) (see col. 1, line 60 through col. 2, line 18).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a method of informing terminal units in service in a corresponding sector or in an idle handoff state through a configuration change indicator (CCI) of a corrected quick paging channel as taught by Islam, to the method of broadcasting short messages in a mobile communication system of Yeom to increase power conservation and decreasing the likelihood of alerting a wrong remote device in an idle or standby state, since all possible phone numbers are assigned to only a limited number of paging indicator (PI) pairs.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kamel et al., U.S. Patent Number 6,374,103 discloses a method and system for overhead message updates.

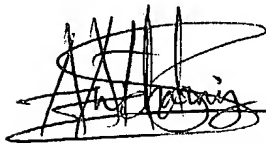
Art Unit: 2681

Padovani., U.S. Patent Number 6,574,211 discloses a method and apparatus for high rate data transmission.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony S Addy whose telephone number is 703-305-8487. The examiner can normally be reached on Mon-Fri 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R Hudspeth can be reached on 703-308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Anthony S. Addy
September 29, 2004



ERIKA A. GARY
PRIMARY EXAMINE